ABSTRACT

CREATIVE PROJECT:

Spatial Ecology: A Park System Model for Midwestern American Sub-urbanism

STUDENT: Hyunja Kim

DEGREE: Master of Landscape Architecture

COLLEGE: Architecture

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Urbanization is an inevitable phenomenon in today's world, but urban and suburban areas are growing at the expense of ecological systems. Because these regions produce many environmental problems, urbanized areas need a new approach to weave natural systems with built contexts. Parks and their systems are a means to incorporate urban ecology in suburban settings. Urban ecology allows cities to identify and protect vulnerable, sustainable, and regenerative natural systems in urbanized cities.

This creative project seeks to develop a Midwestern conceptual urban park system based on spatial urban ecology in the Indianapolis suburbs of Carmel, Fishers, and Noblesville. Exploring how spatial ecology can be mutually beneficial and sustainable for nature and the built context, the park system will be developed based on ecological systems, including buffers, woodlands, grasslands, and wetlands. The ecological-based park model expands Frederic Law Olmsted's philosophy about parks and park systems and level-of-service (LOS) for recreational and park facilities. By testing principles of his model, spatial ecology provides an example for a park system

with urban planning in Midwestern suburbs. Because hydrology is an important natural system to serve circulation, it plays a key role in this project. This project applies green infrastructure to suburban lands for improving natural systems within suburban regions. The proposed park model with urban ecology includes benefits of ecological systems in urban regions by creating sustainable natural environments.